1

50X1-HUM

CLASSIFICATION SECRET

CENTRAL INTELLIGENCE AGENCY
INFORMATION FROM
FOREIGN DOCUMENTS OR RADIO BROADCASTS

REPORT

CD NO.

COUNTRY USSR

SUBJECT Scientific - Medicine, antibiotics

HOW PUBLISHED Weekly newspaper

WHERE PUBLISHED Moscow

DATE PUBLISHED 23 Nov 1950

LANGUAGE Russian

DATE OF INFORMATION 1950

DATE DIST. 21 Dec 1950

NO. OF PAGES 3

SUPPLEMENT TO REPORT NO.

THIS IS UNEVALUATED INFORMATION

SOURCE <u>Meditsinskiy Rabotnik</u>, Vol XIII, No 47 (911), p 4.

SYNTHOMYCIN

by Chief Pediatrician of the Ministry of Public Health, USSR, Prof. A. Dobrokhotova; Chief Physician of the Clinical Children's Hospital, Honorary Physician of the RSFSR Ye. Prokhorovich; Doctor of Medical Sciences R. Sherman; Chief Physician of the Children's Hospital imeni Filatov, Honorary Physician of the RFSFR V. Kvitnitskaya; Prof. G. Lopatin; Acting Chief Physician of the Children's Clinical Hospital imeni Dzerzhinskiy T. Yermolovich; Director of the Pediatric Institute of the Ministry of Public Health, RFSFR, A. Libov.

Bacillary dysentery remains a serious disease notwithstanding recent progress in therapy and prophylaxis. Young children are particularly severely affected because the disease assumes a lingering form which involves relapses. As a result the infection interferes with the normal development of the child. While the treatment of bacillary dysentery with sulfa drugs was originally successful, the bacilli became adapted to sulfa drugs and developed resistant strains.

More than a year ago, the Laboratory of Experimental Chemotherapy of the All-Union Chemo-Pharmaceutical Scientific Research Institute imeni S. Ordzhonikidze (director of the laboratory, F. S. Khanenya, Laureate of the Stalin Prize, synthesized an antibiotic which received the name "synthomycin." This is a crystalline white powder having a yellow or green tinge and a slightly bitter taste. The powder is almost insoluble in water and is stable when stored under ordinary conditions. Synthomycin is particularly effective against bacteria of the intestinal group.

In March 1950 the children's hospitals of Moscow received the new antibiotic for clinical testing. The antibiotic has been used for 6 months on children (particularly young children) infected with dysentery and was found to be very effective and nontoxic. The presidium of the Scientific Medical Council of the Ministry of Public Health of the USSR confirmed the high effectiveness of synthomycin. Its timely application has helped to save many children's lives.

CLASSIFICATION SECRET

STATE	X	NAVY	X	NSRB		DISTRIBUTION
ARMY	X	AIR	X	FBI		

Synthomycin is administered to patients internally in the form of powder or suppositories. First a shock dosis which is divided into two equal parts and administered in two portions within the span of one hour is given. Then the preparation is given 4-6 times per day every 4-6 hours during 7-10 days. Children weighing under 16 kg receive 0.02 g per 1 kg of weight every time that the drug is administered. The shock dosis for children of this group is equal to the per diem dosis. Children weighing more than 16 kg receive 0.2-0.4 g per administration 4 times per 24 hours, and the shock dosis in this case comprises 0.5-1.0 g. In the case of a relapse, the same course of treatment is followed, but without a shock dosis.

In protracted and chronic cases of dysentery, synthomycin is given without a preliminary shock dosis 4 times per 24 hours; children under 16 kg receive 0.03 g per kg weight per administration, while children heavier than 16 kg get 0.2-0.4 per administration, 4 times per 24 hours, during 7-10 days.

The treatment must be continued for at least 7 days, independently of whether there is an improvement or not.

To mitigate the bitter taste, the drug is sweetened. Young childrer who vomit frequently because of a pronounced toxicosis are treated to advantage by administering the drug in the form of suppositories. In that case the ordinary dosis administered 4 times per 24 hours is doubled.

Synthomycin has been used for the treatment of medium, severe, and toxic forms of dysentery; in all cases, a good clinical effect was obtained. Particularly striking were the results in the treatment of the toxic form. Toxicosis disappeared within 12-24 hours after the treatment had been started, consciousness was regained rapidly, and vomiting and convulsions ceased. The quantity of hemoglobin in blood did not diminish under the action of the synthomycin. In view of the fact that antidysenteria serum was not used in cases of toxic dysentery, serological effects must have been absent.

Blood in the excrements usually disappeared within 2 or 3 days after treatment had been begun and normal excrementation was restored between the sixth and 15th day of treatment in the case of children younger than one year, while the corresponding improvement took place between the sixth and tenth day in the case of children older than one year.

The earlier treatment was begun, the more successful it was. Patients who had severe dysentery and were admitted to the hospital on the first or second day often were cured more expeditiously than patients who had a medium type of dysentery, but were admitted between the sixth and eighth day.

Positive cultures of dysenteria bacilli could be obtained from the majority of patients before treatment. At the end of the treatment the cultures were negative and dysenteria bacilli could be obtained in rare cases only. In individual cases there were relapses, but the condition of the patients remained satisfactory and the weight curve did not go down. Patients exhibiting relapses and bacillus carriers were submitted successfully to a repeated course of treatment with synthomcyin under omission of the shock dosis.

The occurrence of complications in the form of otites, pneumonia, etc., was strongly reduced by synthomycin therapy and the complications were less severe. Parallel to synthomycin therapy, hemotherapy, blood transfusions, intravenous introduction of plasma and glucose and (in the case of complications) penicillin were used.

The use of synthomycin usually does not produce any toxic reactions. In rare cases a spotty papular rash appears between the sixth and ninth day of the treatment, but this rash passes in one or 2 days if the condition of the patient is good.

The rapid allayment of toxicosis permitted complete and balanced food intake together with vitamins at an early stage of the disease in order to prevent dystrophy.

Synthomycin was used in special nurseries on children having chronic dysentery, as well as in hospitals. Children who exhibited persistent irregularities of elimination and yielded dysentery bacilli were kept under observation there. These patients received an increased dosis of synthomycin, 0.03-0.04 g per kg of weight per single administration, and the drug was given 4 times per day during 10 days. The drug did not produce any toxic reactions. As a result of the treatment, dysentery bacilli disappeared, elimination became normal, and the children gained weight.

Introduction of synthomycin into medical practice will furnish physicians a valuable remedy for dysentery.

- E N D -